

# **ABSTRACT**

The invention consists of a pulse combustor, comprising two spaced apart outer plates, the outer plates  
5 having flat outer regions, conical regions inside of the flat regions and central hubs, where the volume between conical regions of the plates defines a combustion chamber. The pulse combustor further comprises a plurality of intermediate plates located between the outer plates, the  
10 plurality of intermediate plates being spaced apart to form tailpipe regions therebetween and between the outer plates and adjacent ones of the intermediate plates and a burner coupled to one of the hubs, the burner operative to ignite a fuel/air mixture in the combustion chamber. The outer and  
15 intermediate plates have spiral coolant passageways therein for conducting cooling fluid to cool expanding gases traveling between the plates through the tailpipe regions. The invention further consists of a burner assembly for use in a combustion chamber.